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ABSTRACT

An explanatory linguistic theory attempts to capture and explain the universal nature of human language, to choose among possible grammars of each human language, and to account for the linguistic constraints involved in language acquisition. Discourse theory, like linguistic theory, must be mentalistic in that it seeks to account for mental realities underlying the observed behaviors involved in creating or comprehending discourses. Part of the method of developing discourse generalization, categories, and rules and part of the method of testing them once formulated, is a frank reliance on the intuitions of native speakers about the properties of their discourse systems. Such a set of principles could be developed by at least three distinct routes: (1) philosophical--which starts with an "a priori" notion of the function of particular types of language use and then tries to develop a set of canonical principles which account for how that function is or is not achieved; (2) naturalistic--which observes actual situations of language use with limited prestructuring or manipulation; and (3) experimental--which includes manipulating the listener's role in a conversation, seeing how speakers cope with interruption or noise and looking at revising strategies when a writer or speaker is given a new audience with which to communicate. Until discourse production is reconceptualized as mental processes based on discourse competency systems, it will not be possible to understand what is happening when people use language. (HOD)

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Some Thoughts on Theory and Discourse or How to Pamper the Explanation Seeking Child

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In his editorial notes for Readings in Linguistics I, Martin Joos criticized Trubetzkoy's approach to phonology for trying

> "to explain everything from articulatory acoustics and a minimum set of phonological laws taken as essentially valid for all languages alike, flatly contradicting the American (Boas) tradition that languages could differ from each other without limit and in unpredictable ways, and offering too much of a phonological explanation where a sober taxonomy would serve as well.
>
> Children want explanations, and there is a child in each of us; descriptivism makes a virtue of not pampering that child."
>
> Joos, 1957, p.96

Perhaps more than any other single statement, Joos' note captures the essence of the difference in goals between the structural/descriptive tradition in linguistics and that of the transformational/generative paradigm. From the very outset of his work in developing the generative/transformational approach to linguistics, Noam Chomsky argued that explanation must be sought in order to enable us to choose between descriptively adequate grammars on principled grounds and to understand how children acquire language. In his 1962 presentation to the 9th International Congress of Linguists (published 1964a) and in a slightly revised version as (1964b), Chomsky defined three related levels of adequacy that might be attained in grammatical description.

Observational adequacy is attained "if the grammar presents the primary data correctly"(1964a, p.924). Descriptive adequacy is achieved "when the grammar gives a correct account of the linguistic intuitions of the native speaker, and specifies the observed data (in particular) in terms of significant generalizations that express underlying regularities of the language"(p.924). The further level of Explanatory adequacy could be attained by providing: "a general basis for selecting a grammar that achieves the second level of success over other grammars consistent with the relevant observed data that do not achieve this level of success. In this case we see that the linguistic theory in question suggests an explanation for the linguistic intuition of the native speaker" (p.924).

Chomsky exemplified the different levels of adequacy by using the variation of pronunciation of the lexical item telegraph whether it appears alone or is followed by the endings -ic or -y. An observationally adequate grammar would merely present the phonetic facts as in (1) - (3) below

(1) t e l ɨ g r æ f (#___#)

(2) t e l ɨ g r æ f (ic)

(3) t ɨ l e g r ɨ f (y)

To achieve a descriptively adequate account of these variations, the grammar would have to treat them as special cases of general rules which apply throughout the language. To achieve explanatory adequacy, however, the linguistic theory must provide a way of choosing, in this case, the grammar that shows that such variation can be accounted for

systematically and over the one which, in effect, treats telegraph as an exception of the man - men or see - saw sort.(1964a, pp. 924-927.)

In Aspects (1965), Chomsky further extended the importance of explanatory adequacy by tying it to the process of language acquisition by which the child constructs a grammar. In these terms, the problem of constructing explanatorily adequate grammar "is essentially the problem of constructing a theory of language acquisition, an account of the specific innate abilities that make this achievement possible (1965, p.27)." This way of framing the problem also emphasized his concern with universal linguistic phenomena (those common to all human languages) and his denial of Joos' claim that languages could differ from one another unpredictably. An explanatory linguistic theory attempts to capture and explain the universal nature of human language, to choose among possible grammars of each human language, and to account for the linguistic constraints involved in language acquisition.

In addition to setting explanation as a goal, Chomskyan linguistics also redefined the nature of the thing to be explained. Seeking to account for the "intuitions of the native speaker" would have been anathema to Joos and the descriptivists who hoped only to account for the regularities in such observed data as a collection of utterances. For Chomsky, however, any collection of utterances could underrepresent the potential of the language system, "linguistic theory [must be] mentalistic, since it is concerned with discovering a mental reality underlying actual behavior"(1965, p.4). In order to do this he drew

the now famous distinction between "competence (the speaker-learner's knowledge of his language) and performance (the actual use of language in concrete situations) " (1965, p.4)

Leaving aside for the moment the success or failure of this program in linguistic theory itself, the question I would like to raise here is that of the application of these ideas to the problem of analysing discourse. By discourse analysis I mean the problem of analyzing language in units beyond that of the sentence. This can include, but is not limited to , such phenomena as conversations, extended monologues, stories (or narratives), paragraphs and indeed any "discourse." By discourse analysis I mean the problem of analyzing language in units beyond that of the sentence. This can include, but is not limited to, such phenomena as conversations, extended monologues, stories (or narratives), paragraphs and indeed any "discourse." By a "discourse" I mean only some collection of utterances which are somehow perceived (and intended?) to be connected to one another through some sense of coherence.

Following Widdowson (1973) and Coulthard (1977) I will try to use the following sets of terms:

Grammarians	Discourse Analysts
usage	use
sentence	utterance
locution	illocution
text	discourse

Grammarians	Discourse Analysis
cohesion	coherence

The terms on the left all refer to properties of the language system as a system; those on the right to the function of language to perform social acts including but not limited to communication. As Widdowson and Coulthard point out, the terms on the left and the analyses involving them usually involves data which has been decontextualized while those on the right remain more closely tied to the context of use.

The terms on the right also require an attempt to find ways of determining those functional sense units which do not necessarily have overt signals within the discourse itself. It is relatively easy to observe or generate discourse, but it is enormously difficult to know how to begin to categorize them or to find a basis for understanding what is "typical" or "atypical" about them. Or, in other terms, to go from tokens to types.

My basis as a generative linguist is toward explanation. I am frank to confess that I want to pamper the child in me who wants to know why and, therefore, I want to raise questions about the utility of taxonomies which are unsupported by a principled set of reasons for their categories. I am convinced that what we are exploring here are mental phenomena and that discourse theory, like linguistic theory, must be mentalistic in that it seeks to account for mental realities underlying the observed behaviors involved in creating and/or comprehending discourses. It is too early to tell what the nature of discourse competence might be, but trying to explain it seems to me to be the goal

we are striving to attain.

Part of the difficulty, of course, lies in the very nature of the data itself. If the context of use cannot be somehow abstracted or generalized, then each set of utterances or each discourse must be treated completely idiosyncratically which is to say, in effect, that it cannot be accounted for with anything other than observational adequacy. All we could hope to do would be to present a potentially infinite number of transcripts presenting each conversation, story, essay, etc. in terms of the context of utterance but with no principled commentary. And as Ochs (1979) has pointed out, even the process of transcription itself involves theoretical decisions as to what gets included and, particularly, what gets highlighted.

So among our problems, is the same/different problem or, to put it another way, the for instance problem. How do we decide when two utterances are sufficiently the same (or different) to serve (or not) as an instance of some phenomena or category? Since it is clear that in some ways all utterances are different, as revealed, for example, by looking at them as represented by a sound spectrograph or in terms of when they were uttered, how can we ever count them as the same? Or, more pertinently, if we decide they are appropriately instances, how do we know we are not ignoring crucial differences as we abstract?

Related to this issue is the categorization problem. Even the process of transcription of utterances itself is not a neutral or fully "objective" activity, and if the context and/or non-verbal behavior are to be included in the transcription process, still other complications

and/or biases can be introduced. Beyond the issue of bias, however, is the question of the relative roles of hunting and fishing in the categorization and definitional aspects of discourse analysis. The hunter, in this instance, arrives at the date (or the situation) with a category system developed a priori, and he or she is then looking for instances of particular behaviors which will fit the category system. If the category system is a truly exhaustive taxonomy, then presumably nothing will be missed or over looked (although a certain amount of squeezing square pegs into round holes will nearly always result.) The fisherperson, in contrast, may be more alert for the unexpected and less likely to mislabel but may also be so overwhelmed by the idiosyncracies or the situation that no general interpretation will be possible.

Descriptive adequacy can only be approached, however, by attempting to look for patterns which transcend the idiosyncracies of a particular situation or context. But as the example of linguistics suggests, no amount of "naive" or "unprejudiced" observation alone will inevitably reveal patterns or categories. In fact, assuming that all we need are finer and finer screened observation instruments is one of the dangerous methodological illusions which has plagued much of educational and communications research. Philosophers of science have long since abandoned induction as a fruitful source of theory and generalizations and as discourse analysts we must not be seduced by the apparent "objectivity" of such procedures.

So where are our patterns to come from? What is the source of our generalizations?

models are we trying to build? What sorts of categories, generalizations and so on can we use?

To take the first question first, the sorts of intuitions which seem most useful are those that tell us when something has gone wrong. One of the major methodological procedures of generative grammar has been to exploit the contrast between grammatical and ungrammatical utterances by building rules which will generate (account for) all of the grammatical sentences and none of the ungrammatical ones. Although everyone recognizes that there are problems at the sentence level with some unclear cases, generative grammar has been built on the premise that the distinction between gramatical and ungrammatical sentences can be determined a priori. It should be possible in principle, therefore, to make the same kind of a priori distinction between, say, coherent and incoherent discourses. Distinguishing coherence from incoherence may be even more difficult in actual situations then determining the boundaries of grammaticality (there seem to be a great many more variables involved), but if there are mental principles that we use to make such distinctions, then such an attempt must be made.

Such a set of principles or rules could be developed by at least three distinct routes: philosophical, naturalistic and experimental. The first, involving essentially reflection on our own experience and, perhaps a series of gedanken experiments, is essentially that of the philosopher. The work of Wittgenstein on language games (1953), of Austin (1962) and Searle (1969) on speech acts, and of Grice (1975) on the logic of conversation all seem to exemplify that tradition.

Each starts with an a priori notion of the function of particular types of language use and then tries to develop a set of canonical principles which account for how that function is (or is not) felicitously achieved.

Grice, for example, assumes that the basic principle guiding conversations is the principle of relevance. In interpreting what someone has said, the listener assumes that the speaker is trying to be relevant and therefore tries to find the appropriate connection to the previous subject of the discourse. Conversely, speakers make the same assumption about what their listeners will do and so they don't feel required to make all the conncetions explicit. Related to this principle of relevance are conversational devices for the speaker like: "that reminds me..." or "to change the subject..." which explicitly signal potential violations of the relevance principle and similar devices of the listener like: "what is the point...?" or "I don't follow that..." and so on which indicate that the listener has tried and failed to find the connection.

Such theoretical formulations can, of course, also be the basis of hypotheses which can be tested either naturalistically or experimentally. The naturalistic route has the advantage of observing actual situations of language use with limited prestructuring or manipulation. The work of Labov (1972) on story telling, of Dore (1979) on the acquisition of speech acts by children, and of Sinclair and Coulthard (1975) on the language of classrooms have all been more or less naturalistic. Each has attempted to move toward explanation by generalizing away from the context of utterance toward general rules and,

perhaps most important, all have been particularly sensitive to misfires, infelicities, confusions, communication breakdowns and the like as part of the process of developing these generalizations. Labov has shown, for example, that an unsuccessful oral narrative prompts a "so what?" response from its listener, and therefore argues that the successful story must include either an explicit statement or a clearly implicit message of evaluation in which the teller reveals the "point" of the story.

Other examples of naturalistic studies of discourse and discourse production include the "composing aloud" case studies of the writing process: see, for example, Emig (1971), Perl (1978) and, for methodological discussion, Flower and Hayes (1980) and McCraken (1980), various "pragmatics" approaches to language acquisition like those contained in Ochs and Schieffelin (1979), and the continuing ethnomethodological study of language exemplified by Mehan (1979). While such approaches are undoubtedly valuable in increasing the descriptive base that we need for understanding discourse, all of them suffer from the kinds of weaknesses discussed earlier: a lack of principled or theoretically grounded bases for their categories and an excessive reliance on observation and induction as the basis of their attempts at generalization.

Similar weaknesses concerning the early taxonomic study of child language acquisition were pointed out by Chomsky in 1961 (published as 1964c). He remarked that:

> it is absurd to attempt to construct a grammar that describes observed linguistic behavior directly .. The speaker has represented in his brain a grammar that gives an ideal account of the structure of the sentences

> of his language, but, when actually faced with the task of speaking or "understanding," many other factors act upon his underlying linguistic competence to produce actual performance. (p.36)

He went on to point out that there is:

> a general tendency to oversimplify drastically the facts of linguistic structure and to assume that the determination of competence can be derived from description of a corpus by some sort of sufficiently developed data-processing techniques. My feeling is that this is hopeless and that only experimentation of a fairly indirect and ingenious sort can provide evidence that is at all critical for formulating a true account of the child's grammar. (p.39)

While I am somewhat surprised to find myself advocating experimental approaches to the study of discourse competence, the remainder of the paper will do just that. It should be pointed out, however, that the sorts of experiments I have in mind are quite different from the standard pre-test - treatment - post -test experiments of most educational research, and I am sure that initially, at least, they will involve nearly as small N's as those of the naturalistic paradigm. I will be advocating, instead, what I take to be the sort of "indirect and ingenious" studies for determining the nature of discourse competence that Chomsky called for in helping to determine linguistic competence. The goal remains firmly that of explanation of the mental systems (discourse competence) that underlie discourse performances.

The sorts of experiments I have in mind are based on hypothesizing (from somewhere, we'll return to the sources of hypotheses shortly) the normal or canonical course of events of a discourse production situation, finding some way to interrupt, distort, violate or otherwise interfere with that normal course of events, and to observe how the participants

try to deal with the situation as they try to return to the canonical pattern. Such experiments could include manipulating the listener's role in a conversation, seeing how speakers cope with interruption or noise, looking at revising strategies when a writer (or speaker) is given a new audience to communicate with, and the like. The point of such experiments is that violation of the hypothesized rules or norms should cause a breakdown in the system and result in some kind of repair effort. The repair strategies will be most useful of all in revealing how accurately the hypothesized rules have captured the situation.

The initially hypothesized rules or principles themselves can come from any source, but the most useful will probably be the naturalistic case study records discussed briefly above and the philosophical theories of the nature of language use. The only real requirements are that the hypothesis be sufficiently explicit so that it makes a potentially falsifiable empirical claim and that the experimental method be sufficiently controlled so that the results of the experiment actually bear on the hypothesis with, if possible, no other equally plausible explanations. These requirements may be too strong in many situation since the number of potential causative factors is so enormous. For example, the relative power status of the speakers, the formality level of the situation, the purposes each participant brings to the task and so on can cause potential distortion of the results. They must therefore be anticipated and, as far as possible, controlled for or explained away if the "results" are to lead to knowledge.

While it would be beyond the scope of this paper to describe a detailed set of such experiments, it should be clear that no experimentation at all can be done without at least a vague theory of the domain to be investigated which can generate a tentative (and undoubtedly incomplete) model of the processes involved. We are both fortunate and unfortunate that these competencies and processes are human phenomena. Fortunate because we can use our own heads as laboratories to give us a rough direction to go in; unfortunate because we may be fooled into believing that what we think we do is what we actually do.

We can use our own awareness (and heighten that awareness) by asking: what does someone need to <u>know</u> (unconsciously, remember) in order to do X? (Where X is, say, make a request or a promise, engage in a coherent conversation, write a story or essay, or, for that matter read one, etc.)[2] By specifying the knowledge required - and as I suggested above, there are already some extant ideas about this in the work of the philosophers and others - we can then use that specification as a basis for contriving violation situations in which part of the hypothesized knowledge isn't provided or in which one participant acts as though they didn't have it.

In some ways we have too many theories - or, better, untested speculations - and in some ways we have too few. What is clear is that

[2] The unconscious quality of this knowledge cannot be overemphasized since it is clear, for example, that two year olds have already mastered a wide variety of language functions but use them completely without metalinguistic awareness.

until we reconceptualize discourse production (or interpretation) as mental processes based on discourse competency systems, we will not only never be able to understand what is happening when people use language, but we will be in total darkness about how we learn to do it. For those of us whose concerns are with facilitating the learning and the improvement of these processes in order to help our students become, for example, better writers and readers, it seems clear that we must participate in this process of theory building and testing, or we will contintue to be in the stage of passing on recipes for action whose basis we don't understand.

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